

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A ~~novel~~ human cell strain enabling the continuous production of a desired protein with high efficiency, comprising:

a ~~novel~~ human cell strain established by transforming a human cell strain whose total intracellular protein weight is 0.1 to 1 mg per 1,000,000 cells;

with said ~~novel~~ human cell strain being further characterized in that after a gene encoding a desired protein is transfected into it, the transfected cell is subsequently cultured.

2. (Currently amended) The ~~novel~~ human cell strain of Claim 1, which is established from human myeloma-derived RPMI8226 cells.

3. (Currently amended) The ~~novel~~ human cell strain of Claim 1, which is established from human myeloma-derived KMS-12BM cells.

4. (Currently amended) The ~~novel~~ human cell strain of Claim 1, wherein said human cell strain is established by choosing, out of human cell strains with a total intracellular protein of on or about 0.1-1.0mg per 1,000,000 cells, cell clones which have a doubling time of 18 to 24 hours and which have a 90% rate of cloning by limiting dilution method; and mutating said cell clones with carcinogens; and selecting cells out of said mutated cells, which have a doubling time of 18 to 24 hours and a 90% rate of cloning by limiting dilution method.

5. (Currently amended) The ~~novel~~ human cell strain of Claim 4, wherein said carcinogens are selected from the group consisting of nitrosoguanidine (MNNG), phorbol ester (PMA) and ethylmethane sulfonate (EMS).

6. (Currently amended) The ~~novel~~ human cell strain of Claim 1,
wherein said ~~novel~~ human cell strain can continuously produce the desired protein with high efficiency by culturing a clone, which has been transfected with a gene encoding the

desired protein and has expressed the desired protein, in synthesis minimal essential medium ERDF with or without growth factors.

7. (Currently amended) A ~~novel~~ human cell strain, enabling the continuous production of a desired protein at a yield of 1 ng – 10 : μ g/day per 1,000,000 cells at least over a 2-month period, comprising:

a ~~novel~~ human cell strain established by transforming a specific human cell strain;
with said ~~novel~~ human cell strain being further characterized in that after a gene encoding a desired protein is transfected into it, the transfected cell is subsequently cultured in a serum free medium.

8. (Currently amended) A method for selecting a ~~novel~~ human cell strain for producing a desired protein, comprising:

(a) selecting a human cell strain with a total intracellular protein of on or about 0.1 – 1 mg per 1,000,000 cell; and

(b) choosing, out of human cell strains with a total intracellular protein of on or about 0.1-1.0mg per 1,000,000 cells, cell clones which have a doubling time of 18 to 24 hours and which have a 90% rate of cloning by limiting dilution method; and mutating said cell clones with carcinogens; and selecting cells out of said mutated cells, which have a doubling time of 18 to 24 hours and a 90% rate of cloning by limiting dilution method, to be said novel human cell strain.

9. (Currently amended) The method for selecting a ~~novel~~ human cell strain of Claim 8, wherein said carcinogens are selected from the group consisting of nitrosoguanidine (MNNG), phorbol ester(PMA) and ethylmethane sulfonate(EMS).

10. (Currently amended) The method for selecting a ~~novel~~ human cell strain of Claim 8, wherein said ~~novel~~ human cell strain can be continuously produced with high efficiency by culturing the clone, which has been transfected with the gene encoding the desired protein and has expressed the desired protein, in synthesis minimal essential medium ERDF with or without

growth factors.

11. (Currently amended) A method for producing proteins, comprising the use of the a novel human cell strain of Claim 1 ~~as in any of claims 1-7~~.

12. (Currently amended) A method for producing proteins, comprising:
transfecting a gene encoding a desired protein into the ~~novel~~ human cell strain of Claim 1;
and culturing the transfected cells, to continuously produce the desired protein with high efficiency.

13. (Currently amended) The method of Claim 12, wherein ~~a vector containing a cytomegalovirus-derived promoter and a gene encoding the desired protein, is employed to produce the desired protein~~ said transfecting is achieved by employing a vector containing a cytomegalovirus-derived promoter and a gene encoding the desired protein, to produce the desired protein.

14. (Currently amended) The method of Claim 12, wherein ~~a clone, for which the said novel human cell strain, which has been transfected with a gene encoding a desired protein and which has expressed the desired protein~~ by the clone, is cultured in synthesis minimal essential medium ERDF with or without growth factors.

15. (Original) The method for producing protein of Claim 14, wherein said growth factors include insulin, transferrin, ethanolamine, and sodium selenite.

16. (Currently amended) The method ~~for producing protein~~ of Claim 14, wherein ~~a clone, for which the said novel human cell strain, has been transfected with a gene encoding a desired protein and which has expressed the desired protein;~~ by the clone, is cultured in a large-scale and high-density culture (10^7 to 10^8 / ml) with a serum-free medium.

17. (Currently amended) A protein purifying method comprising:
using the a novel human cell strain of Claim 1 ~~as in any of claims 1-7~~ to produce a protein; and
purifying said protein, for which said human cell strain has been transfected with a gene encoding
said protein.

18. (Original) The purifying method of Claim 17, further comprising producing a highly
efficient and highly pure desired protein derived from the gene encoding said protein, by
culturing a clone, which has been transfected with a gene encoding the desired protein and which
has expressed the desired protein, in synthesis minimal essential medium ERDF with or without
growth factors.

19. (Cancelled)

20. (Currently amended) A The novel human cell strain of Claim 1 ~~as in any of Claims~~
~~1-19~~ wherein said human cell strain is a protein producing cell strain named as SC-02MFP
(Accession Number FERM BP-10078).

21. (New) The ~~novel~~ human cell strain of Claim 1 wherein said human cell strain is a
protein producing cell strain named as SC-01MFP (Accession Number FERM BP-10077).